

## WHAT IS CLAIMED IS:

- 1                   1. A method for serving a print by reference operation to print  
2   referenced content from a referenced location to a print device, the method  
3   comprising steps of:  
4                   accepting, from a print client, a reference to print content targeted  
5   for printing from a location indicated by the reference;  
6                   resolving the reference to determine the location indicated by the  
7   reference;  
8                   obtaining print data from the location indicated by the reference;  
9                   transcoding the print data into a print device ready format;  
10                  allowing access to print data transcoded by said step of transcoding;  
11                  transferring, in response to a request from the print client, print data  
12   transcoded by said step of transcoding.
- 1                   2. The method according to claim 1, wherein said step of accepting  
2   accepts the reference from an Internet connection to the print client.
- 1                   3. The method according to claim 1, wherein the reference  
2   comprises a universal resource locator address that addresses print content targeted  
3   for printing.
- 1                   4. The method according to claim 1, wherein said step of accepting  
2   accepts a reference list of individual references that each reference print content  
3   stored at a location.
- 1                   5. The method according to claim 4, wherein said steps of resolving,  
2   obtaining, transcoding, and allowing are completed for a first one of said  
3   individual references in said reference list before being conducted for another one  
4   of said individual references in said reference list.
- 1                   6. The method according to claim 1, further comprising a step of  
2   initiating a control communication with the print client.

1           7. The method according to claim 6, wherein said step of initiating a  
2 control communication is conducted via an argument resolution protocol and said  
3 steps of accepting and transferring are conducted via a data transfer protocol.

1           8. The method according to claim 7, wherein the argument  
2 resolution protocol is the Simple Object Access Protocol and the data transfer  
3 protocol is an HTTP protocol.

1           9. The method according to claim 1, further comprising steps of:  
2 accepting a security challenge from the location indicated by the  
3 reference; and  
4 responding to the security challenge.

1           10. The method according to claim 9, wherein said step of  
2 responding comprises passing the security challenge to the print client.

1           11. The method according to claim 1, wherein said step of allowing  
2 comprises:  
3 establishing a universal resource locator address for the print data  
4 transcoded by said step of transcoding; and  
5 communicating the universal resource locator address for the print  
6 data to the print client.

1           12. The method according to claim 1, further comprising a step of  
2 conducting a financial clearance.

1           13. The method according to claim 1, further comprising a step of  
2 requiring a billing ID from the print client.

1           14. A print service realized as a computer program product  
2 comprising a computer usable medium having computer readable program code  
3 embodied in the medium that when executed causes a computer to:

4 accept a reference from a print client to print content targeted for  
5 printing from a location indicated by the reference;

6 resolve the reference to determine the location indicated by the  
7 reference;

8 obtain the print content from the location indicated by the reference;  
9 transcode the print content into a print device ready format;  
10 allow access to the transcoded print content; and  
11 transfer the transcoded print content to the print client in response to  
12 a request from the print client.

1 15. The print service according to claim 14, wherein the software  
2 accepts the reference from a direct connection to the print client.

1 16. The print service according to claim 14, wherein the software  
2 accepts the reference from an Internet connection to the print client.

1 17. The print service according to claim 14, wherein said software is  
2 resident in a web host and the print service is a web site allowing the print service  
3 to be reached by the print client via the Internet.

1 18. The print service according to claim 17, wherein the web site is  
2 discoverable by the print client through the Internet.

1 19. The print service according to claim 18, wherein the web site is  
2 pre-configured into print clients to be discoverable when print services are  
3 required by the print clients.

1 20. The print service according to claim 18, wherein the web site is  
2 registered into a service registry to be discoverable by print clients.

1 21. The print service according to claim 18, wherein the web site is  
2 discoverable via network discovery protocols.

1 22. The print service according to claim 14, wherein the software  
2 accepts a reference that is a Universal Resource Locator addressing a content  
3 provider.

1 23. The print service according to claim 14, wherein the software  
2 accepts a reference comprising multiple references to print content targeted at  
3 multiple locations for printing.

1 24. The print service according to claim 23, wherein the multiple  
2 references comprise a list of multiple Universal Resource Locators.

1           25. The print service according to claim 23, wherein each of the  
2 multiple references is processed separately followed by sequential processing of  
3 remaining references in a list.

1           26. The print service according to claim 14, wherein the print  
2 service, at the time the software accepts a reference, the reference receives a  
3 control communication with the print client over a control communication channel  
4 and opens a separate data channel for data exchange.

1           27. The print service according to claim 26, wherein the software  
2 receives the control communication via an argument resolution protocol.

1           28. The print service according to claim 27, wherein the argument  
2 resolution protocol is the Simple Object Access Protocol.

1           29. The print service according to claim 27, wherein the argument  
2 resolution protocol is layered on top of an HTTP protocol.

1           30. The print service according to claim 27, wherein the software  
2 accepts control communications via the argument resolution protocol to:

- 3           create a new print job;  
4           check status of an existing print job; and  
5           cancel an existing print job.

1           31. The print service according to claim 30, wherein the software  
2 accepts a request to create a new print job from the print client.

1           32. The print service according to claim 31, wherein the software  
2 creates a unique job identifier when accepting a request to create a new print job  
3 from the print client and communicates the job identifier to the print client for use  
4 in further communications concerning the new print job.

1           33. The print service according to claim 14, wherein the software  
2 transcodes into a form that depends on a device type of the print client.

1           34. The print service according to claim 14, wherein the software  
2 conducts a financial clearance of the print client.

1           35. The print client according to claim 14, wherein the software  
2   requires a billing ID from the print client.

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